

## ***Remarks***

### **Status of the Claims and Support for Amendments**

Prior to the amendments provided herein, claims 96-110 were pending in the application. Claims 111-116 were canceled in a prior amendment.

Applicants amend claims 96, 97, and 99-110 herein to more particularly state certain aspects of the invention. These amendments add no new matter, and Applicants respectfully request their entry. Applicants also cancel claim 98 without prejudice or disclaimer, reserving the right to prosecute this claim, or other claims based on the same subject matter, in other applications, such as continuation applications. Applicants also add claims 117-124 herein. These claims add no new matter, and their entry is respectfully requested. Upon entry of the amendments herein, claims 96, 97, 99-110, and 117-124 will be pending and under prosecution.

Claim 96 has been amended to recite a method for making a molecular weight ladder, in which the method includes producing a plurality of polypeptides of different molecular weights comprising thioredoxin or a thioredoxin deletion mutant and incubating the plurality of polypeptides with at least one protein binding dye to form a stained molecular weight marker ladder. Support for making molecular weight ladders can be found throughout the specification as filed, for example, at least on page 6, lines 13-17, page 15, lines 5-7, page 25, lines 2-3, and in the Examples, particularly Examples 3 and 4, and Table 1, of the application as filed. Support for use of thioredoxin or a thioredoxin deletion mutant can also be found throughout the specification, for example, at least on page 18, lines 20-21, as well as on page 24, lines 18-23. Claim 97 has been amended to recite a molecular weight standards. Support for molecular weight standards

can be found in the specification as filed, for example, at least on pages 25, lines 1-3, page 36, lines 7-8, page 37, lines 1-3, and page 41, lines 22-25. Claims 99-109 have been amended only to make the language of the dependent claims conform to that of amended claim 96. Claim 110 has been amended to clarify the language of the claim. Claim 98 has been canceled without prejudice or disclaimer. No new matter has been added in these amendments, and their entry is respectfully requested.

New claims 117-122, drawn to molecular weight ladders comprising polypeptides ranging in molecular weight from 5 kD to 300 kD, of molecular weight increments of 5 kD, 10 kD, 20 kD, 25 kD, 50 kD, or 100 kD, find support, for example, at least on page 26 of the application as filed, lines 5-9. New claims 123 and 124, reciting a method for making a molecular weight ladder that comprises thioredoxin or thioredoxin deletion mutant fusion proteins, find support at least on page 32, line 4 through page 33, line 3 of the application as filed, as well as in Table 1. These claims add no new matter, and their entry is respectfully requested.

#### Rejections Under 35 U.S.C. §112, Second Paragraph

Claims 96-110 have been rejected under 35 U.S.C. §112, second paragraph, for being indefinite for recitation of the phrases “thioredoxin polypeptide”. To expedite allowance of claims, and not in acquiescence to the rejection, claim 96 has been amended to remove the term “thioredoxin polypeptide” and now recites a method for making a molecular weight standard that includes producing a plurality of polypeptides of different molecular weights comprising thioredoxin or a thioredoxin deletion mutant.

Claim 110 also stands rejected for allegedly being indefinite in referring to SEQ ID NO:8. To expedite allowance of claims, Applicants have amended claim 110 to unambiguously convey that SEQ ID NO:8 refers to the sequence encoding a carboxy-terminal deleted E. coli thioredoxin.

Applicants assert that claims 96, 97, and 99-110 as amended comply with 35 U.S.C. §112, second paragraph. Claim 98 has been canceled, rendering its rejection moot. Applicants therefore respectfully request that the rejection of claims 96-110 under 35 U.S.C. §112, second paragraph, be withdrawn.

#### Rejections Under 35 U.S.C. §112, First Paragraph

Claims 96-100, 109, and 110 have been rejected for failure to meet the enablement requirement of 35 U.S.C. §112, first paragraph, for allegedly containing subject matter for which the specification does not reasonably provide enablement. The Office Action states that the specification “while being enabling for a method of making stained molecular weight markers comprising producing a “thioredoxin polypeptide” comprising thioredoxin or a truncated thioredoxin, does not reasonably provide enablement for a method of making stained molecular weight markers comprising producing “a thioredoxin polypeptide” comprising a “modified” thioredoxin.” Applicants respectfully disagree.

Nevertheless, to expedite allowance of claims, and not in acquiescence to the rejection, Applicants have amended independent claim 96, such that it no longer recites methods of producing a “thioredoxin polypeptide comprising thioredoxin or a modified thioredoxin”. Claim 96 as amended now recites a method of making a stained molecular

weight ladder that comprises a plurality of polypeptides of different molecular weights that comprise thioredoxin or a thioredoxin deletion mutant. In this regard, the MPEP at 2164.08 states:

Claims are not rejected as broader than the enabling disclosure under 35 U.S.C. 112 for noninclusion of limitations dealing with factors which must be presumed to be within the level of ordinary skill in the art; the claims need not recite such factors where one of ordinary skill in the art to whom the specification and claims are directed would consider them obvious. In re Skrivan, 427 F.2d 801, 806, 166 USPQ 85, 88 (CCPA 1970).

Applicants assert that claim 96, and claims depending therefrom, are supported by enabling disclosure both in the specification and based on the knowledge of one of average skill in the art in making expression constructs that include sequences encoding polypeptides, and in expressing proteins (for example, in *E. coli*), and in purifying expressed proteins. Applicants therefore assert that claims 96, 97, 99, 100, 109, and 110 meet the enablement requirement under 35 U.S.C. §112, first paragraph, and respectfully request withdrawal of the rejection.

### *Conclusion*

Prompt and favorable consideration of this Amendment is respectfully requested. Applicants believe the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Respectfully submitted,

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